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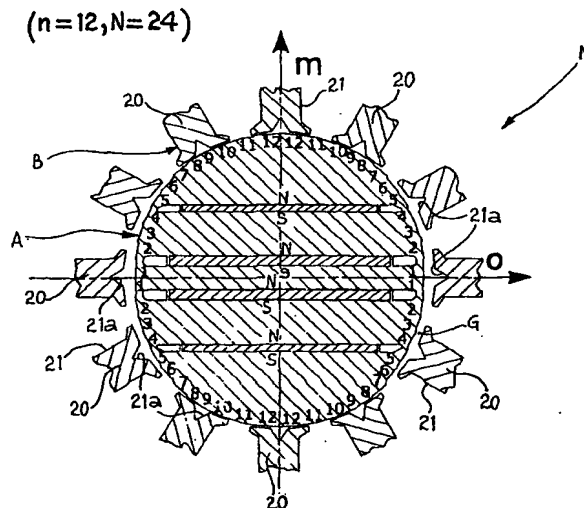
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(54) Title: A SYNCHRONOUS ELECTRICAL MACHINE



(57) Abstract: The electric machine (M) comprises an armature (A) and an inductor (B), the inductor (B) having for each pair of poles (N, S) of the armature (A), n teeth (20) identical to one another and n slots (21) and being provided with a winding (W) housed in the said n slots. The armature (A) has its surface facing the air gap (G) divided into 2N elements or samples (1-12) with N being a whole multiple of n, having substantially the same extent in the said direction of relative displacement, and having a respective magnetic potential value. Each sample (1-12) of the armature (A) is associated with a value of total magnetic permeance (π_i) at the air gap (G) in a predetermined alignment condition between the inductor (B) and the armature (A). The armature (A) comprises a plurality of magnetically distinct ferromagnetic bodies (30, 31, 32;...) each of which couples at least two armature samples in such a way as to ensure a substantial magnetic equipotentiality.